
Ambient Weather AirBridge for Ambient Weather Observer Stations Quick Start Guide



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1 Introduction



Note: For technical issues, please email the developer: info@meteohub.de.

Please reference Section 9.2.1 for instructions on providing remote access to the developer. Provide the URL and your password.

The Ambient Weather AirBridge communicates directly to the Ambient Weather Observer wireless sensor array. No display console is required to receive the data from the sensor array.

The AirBridge includes an internal barometer and thermometer, and does not communicate to the thermo-hygrometer-barometer included with some of the Ambient Weather Observer packages. Humidity is currently not supported.

The following quick start programming guide provides basic instructions for configuring your AirBridge. This is a supplement to the detailed information provided at www.MeteoBridge.com.

Note: Ambient Weather uses the terms AirBridge, WeatherBridge, MeteoStick and MeteoBridge interchangeably. AirBridge is the complete product, including the AirBridge Transmitter, WeatherBridge computer (TP-LINK), and operating system. The operating system is referred to as MeteoBridge, developed by smartbedded UG, on the web at www.MeteoBridge.com.

Note: The AirBridge has been programmed and licensed by Ambient Weather before you receive it. For warranty replacement, please contact Ambient Weather directly. Ambient Weather warranties this product for 1 year.

The unit has been tested thoroughly before shipping.

2 Product Limitations

- The AirBridge does not support an indoor humidity sensor and will always read 30%.
- The indoor temperature is measured inside the AirBridge receiver, and subject to internal heating, and does not accurately reflect ambient temperature.
- The wireless range of the AirBridge receiver is approximately 300 feet.

3 Voiding the Warranty

The AirBridge receiver has a transparent housing to satisfy any curiosity about what is inside. There is no need to open the housing. If you open the case, you will damage the receiver and void the warranty.

4 Packing List

The packing list is as follows:



No	Description	Image
1	AirBridge Receiver and Cradle	
3	WeatherBridge Computer	
4	WeatherBridge Power Adapter	
5	WeatherBridge Power USB Cable	
6	Ethernet Cable	

Figure 1

5 Connections

Connect the WeatherBridge Computer as follows (reference Figure 2):

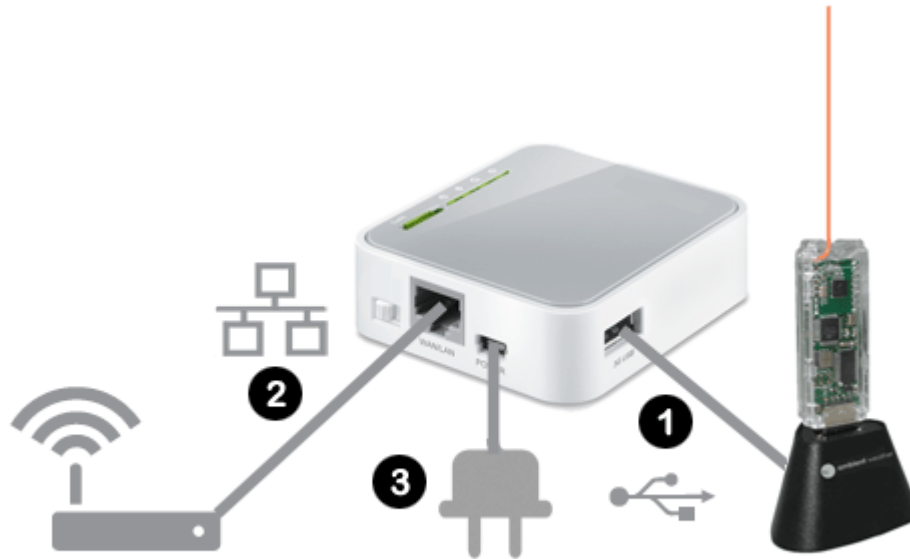


Figure 2

Step	Description
1	<ul style="list-style-type: none"> Remove the transparent cap from the AirBridge receiver. Connect the AirBridge to the AirBridge cradle. Connect the AirBridge cradle to the WeatherBridge USB port.
2	<ul style="list-style-type: none"> Connect the WeatherBridge to your router with an Ethernet cable. Note: You can disconnect it later after configuring the WiFi settings.
3	<ul style="list-style-type: none"> Connect the included USB cable to the included power adapter. Connect the USB mini connector to the USB mini port on the WeatherBridge. Plug into wall power. <p>Note: This cable has a mini USB and full sized USB connector. The full sized USB connector is not used.</p>

5.1 WeatherBridge Status Lights

The power light will turn ON (reference **Figure 3**).

The Status/Reset light will flash slowly, then rapidly, then solid green. This process can take several minutes. Once the status/reset light is solid green, you are ready to begin.

If it does not turn green, and continues to flash rapidly, it has not made a connection to the Internet. Check your connections and firewall settings.

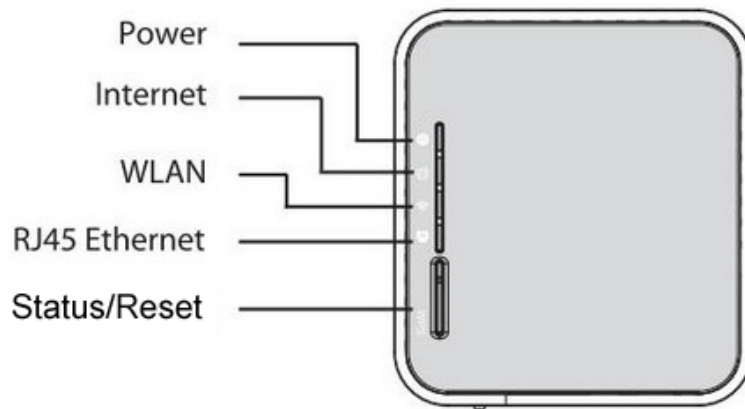


Figure 3
Status Lights

Note: The three position switch (3G/WISP/AP) does nothing at the moment. You can leave this switch in the default position.

5.2 AirBridge Status Light

The green AirBridge Status light will flash about one every 15 seconds.



Figure 4

6 IP Addressing (finding the WeatherBridge)

There are several different ways to read the IP address of the WeatherBridge (easiest first):

- Use the Magic IP Finder (preferred)
- Use a network software scan tool
- Read the blinking Status/Reset Lights
- Write IP address to a USB stick (optional)

6.1 Magic IP Finder (preferred)

If the WeatherBridge Status light is solid green, it has made a connection to the internet. Simply type the following web address into your computer's web browser, and the MagicIP Finder will find your IP:

<http://magicip.meteobridge.com>

The date and time of the last successful connection will be recorded. Here is an example:

Meteobridge TL-MR3020 (MAC A0:F3:C1:C9:34:EE) with LAN IP [192.168.0.42](#) at 2013-02-19 20:25:29.

If prompted for the Username and Password, enter:

Username: meteobridge

Password: meteobridge

6.2 Software Scan Tool (alternate IP finder)

The WeatherBridge is programmed from the factory for dynamic addressing (or DHCP). This allows you to address the unit from any computer on your network without modifying the IP address.

However, since it is dynamic, you will have to determine the address that was assigned to the unit.

To determine this address, download a free IP scan tool here:

<http://www.advanced-ip-scanner.com>

For Mac and Linux users, visit:

<http://www.angryip.org/w/Download>

Select the **Scan** button in the software. After the scan is complete, locate the IP address associated with the Mac Address of the WeatherBridge. The Mac address is printed on a sticker, on the side of the WeatherBridge (upper right hand corner, below the bar code).

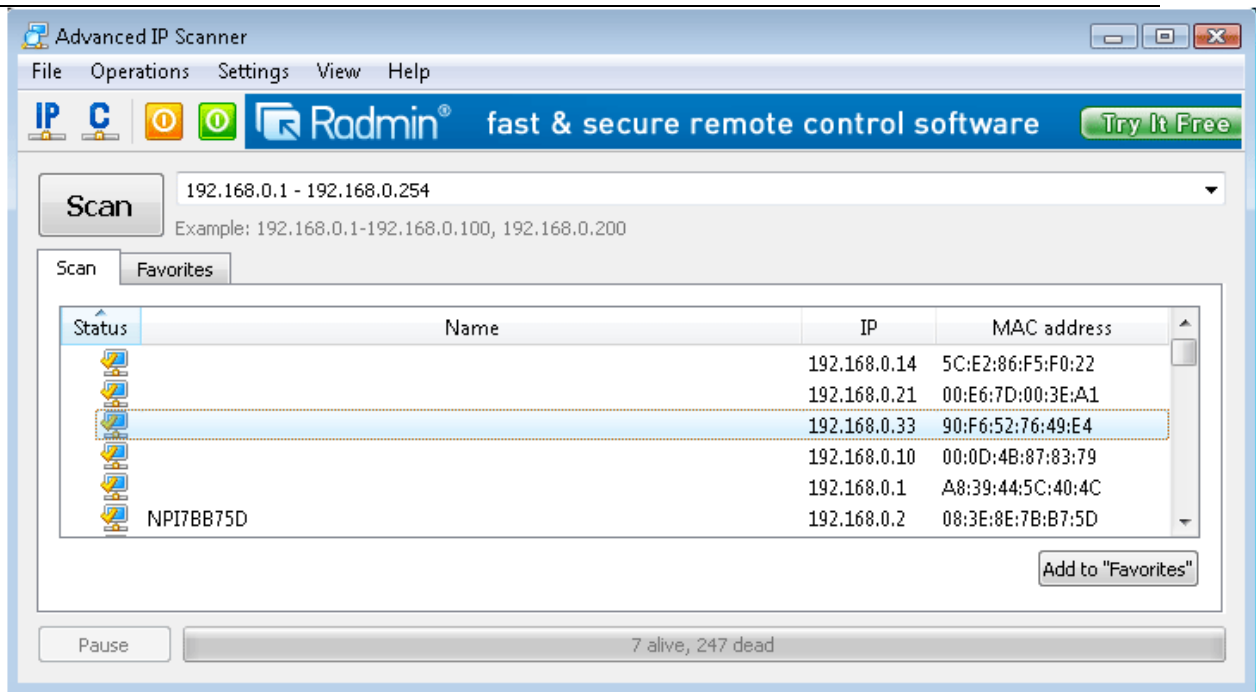
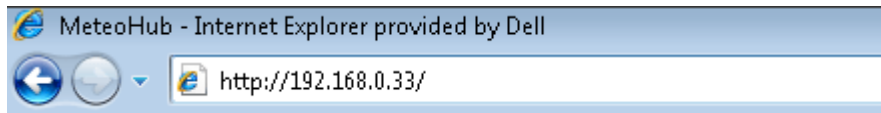


Figure 5

In the example above, type <http://192.168.0.33> into your browser to begin communicating to the MeteoBridge.



6.3 Reading the Blinks from the Status/Reset Light (alternate IP finder)

To read the IP address from the Status/Reset light, wait for the Status/Reset LED to stop blinking (when booting up, it will blink slowly, then quickly, then solid on). This process may take several minutes.

Press the Status/Reset button, then immediately let go to begin. It is helpful to have a paper and pen handy to write down the coded LED response.

The LED will turn off, then start blinking the IP pattern with a combination of medium flashes, separated by long flashes. The medium flashes represent the IP address and the long flash represents the dot separator.

This is best understood with an example:

Example: IP 192.168.10.77

Legend: M = Medium flash, L = Long Flash, _ = LED is OFF

Signal	Comment
_ M _ M M M M M M M M M _ M M _ L	192
_ M _ M M M M M M _ M M M M M M M M M _ L	168
_ M _ M M M M M M M M M M _ L	10

In the example above, type http://192.168.10.77 into your browser to begin communicating to the WeatherBridge.

6.4 Using USB Stick (alternate IP finder)

A blank USB stick is optional with this package. If the weather station is connected to the USB port, disconnect the AirBridge cradle and insert the blank USB stick into the WeatherBridge.

Press the Status/Reset button, then immediately let go to begin. Wait for the LED to turn back on, then disconnect the USB stick from the WeatherBridge and insert into the USB port on your computer. Your computer should recognize this file and display the directory.

The following file will be written to the USB stick:

network.log

Open this file with any text editor (such as notepad).

```
Sat Jan 5 00:23:16 UTC 2013
MAC: xx:xx:xx:xx:xx:xx
LAN IP: 192.168.123.245
```

In the example above, type http://192.168.123.245 into your browser to begin communicating to the WeatherBridge.

7 Browser Access

Enter the IP address found in the previous step into your web browser.

If prompted for the Username and Password, enter:

Username: meteobridge

Password: meteobridge

8 License

From the Menu tab, select **License**, as shown in Figure 6. Record the **License Key** for warranty purposes:

License Key (case sensitive):

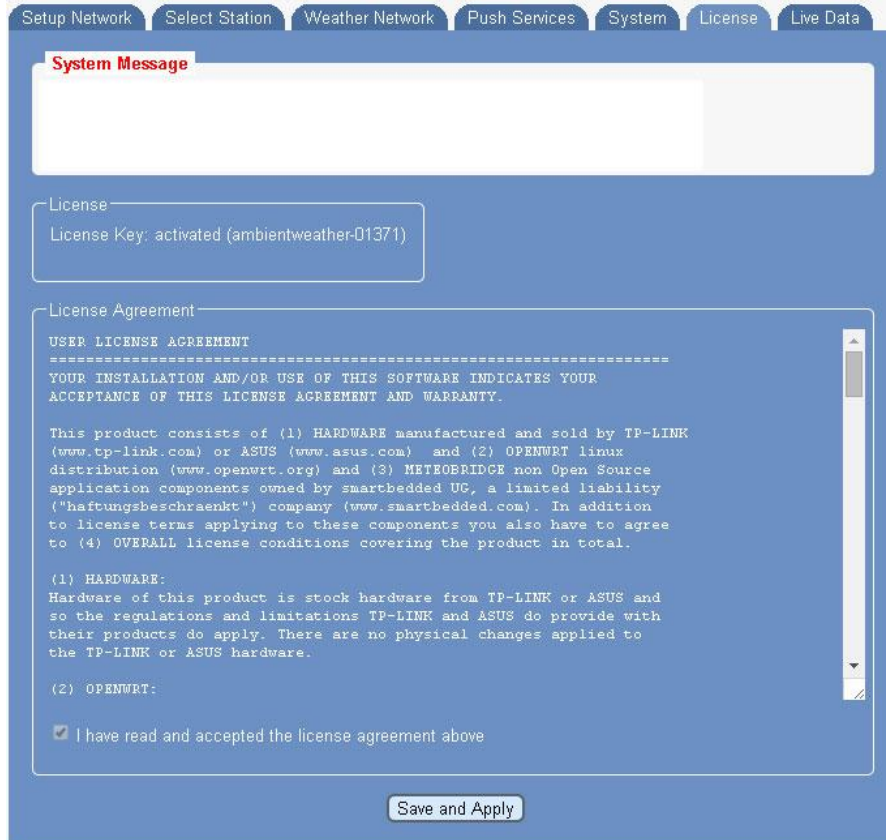


Figure 6
License Key

9 System

From the Menu tab, select **System**.

9.1 Network

Record the **Mac Address** for warranty purposes, as shown in Figure 8.

Note the **IP address** for future reference. This IP address should not change unless changes to the router are made.

MAC Address:
IP Address:

9.2 Security (password)

The default username and password is meteobridge and meteobridge. There is likely no need to change this, but you can enter a new username and password. Record the changed username and password here for future reference:

Username: (default is meteobridge)

Password: (default is meteobridge)

To make the changes permanent, select **Save and Apply**.

9.2.1 Remote Login

To login remotely, from the System Tab, select the checkbox Allow login from the internet via [this URL](#).

Note: It can take up to one hour for this remote login URL to become active.



Security

New Password:

New Password:

Internet Login: Allow login from the Internet via [this URL](#)

Figure 7

9.3 Localization

Enter the appropriate time zone, longitude and latitude, and select **Save and Apply**.

Setup Network | **Select Station** | Weather Network | Push Services | System | License | Live Data

System Message

System

Platform: TP-LINK TL-MR3020
 RAM: 29364 kB total, 5792 kB free (80% used)
 Software Version: Linux 3.3.8 mips (BE), FW 1.4, MeteoBridge 2.3 (4277)
 Version Control: **newest** on next reboot
 Uptime: 0 hours, 43 minutes Buffer Usage:



Security

New Password:
 New Password:
 Remote Support: Allow *smartbedded UG* a remote login when provided the MAC

Localization

UTC: 2014-07-01 15:57
 Local Time: 2014-07-01 15:57
 Language: **English**
 Timezone: **UTC**
 Latitude:
 Longitude:
 Annual Rain: starts at **January**

Network

MAC: 10:FE:ED:B1:23:7C
 LAN IP: 192.168.0.20 WLAN IP: --
 LAN Mask: 255.255.255.0 WLAN Mask: --
 Gateway: 192.168.0.1
 DNS: 127.0.0.1
 WAN IP: 174.17.161.134

Messages

```

logger (01.07.2014 15:31:59): No historical data loaded.
logger (01.07.2014 15:31:59): data logger (version 4.9a, build 4277) started.
logger (01.07.2014 15:37:29): child process received timeout signal (14).
logger (01.07.2014 15:37:30): data logger stopped.
logger (01.07.2014 15:37:30): No historical data loaded.
logger (01.07.2014 15:37:30): data logger (version 4.9a, build 4277) started.
logger (01.07.2014 15:43:00): child process received timeout signal (14).
logger (01.07.2014 15:43:00): data logger stopped.
logger (01.07.2014 15:43:01): No historical data loaded.
logger (01.07.2014 15:43:01): data logger (version 4.9a, build 4277) started.
logger (01.07.2014 15:48:31): child process received timeout signal (14).
logger (01.07.2014 15:48:31): data logger stopped.
logger (01.07.2014 15:48:31): No historical data loaded.
logger (01.07.2014 15:48:31): data logger (version 4.9a, build 4277) started.
logger (01.07.2014 15:54:02): child process received timeout signal (14).

```

Figure 8

10 Setup Network

From the Menu tab, select **Setup Network**

10.1 Type of Connection and Configuring WiFi

The default network connection setting is LAN, DHCP (dynamically assigned IP address).

To connect to your wireless network, select the Wireless LAN option and enter the wireless network settings, as shown in Figure 9.

To convert from LAN to Wireless LAN, select **Save and Apply and Reboot**, and disconnect from your router.

The IP address may change. Refer to Section 6 to find the new IP address (if required).

10.2 IP Address

You can change from DHCP to manually assigning the IP address, as shown in Figure 9 (this is only an example, your network settings will be different). In most cases, you will not need to change the IP address to a static IP on your network.

To convert from DHCP to statically assigned IP address, select **Save and Apply and Reboot**.

The IP address can be accessed in a few minutes through your browser. Wait until the status light on the WeatherBridge transitions from blinking rapidly to a solid.

10.3 Restoring the default IP Address

In the event the IP address cannot be accessed and the status light is blinking rapidly, plug the WeatherBridge into your router, press and hold the status light until it blinks once, then let go. The WeatherBridge will reboot and wait until the status on the WeatherBridge transitions from blinking rapidly to a solid.

10.4 Restoring to Factory Default

To restore the WeatherBridge to factory default, plug the WeatherBridge into your router, press and hold the status light until it blinks five times, then let go. The WeatherBridge will reboot and wait until the status on the WeatherBridge transitions from blinking rapidly to a solid.

10.5 Advanced Network Settings

If you are having issues communicating over your Local Area Network (LAN) or Wireless Area Network (WLAN), we recommend reviewing the following guide:

http://meteobridge.com/wiki/index.php/Setup_Network#Type_Of_Connection

Setup Network | **Select Station** | Weather Network | Push Services | System | License | Live Data

System Message

Wizard: Please visit tab 'Select Station', finalize setup and press 'Save'
 Wizard: Please visit tab 'Weather Networks', finalize setup and press 'Save'
 Wizard: Please visit tab 'System', finalize setup and press 'save and apply'

Type of Connection

LAN

Wireless LAN

SSID: ▾

WLAN Region: ▾

Encryption: ▾

Mode: ▾

Passphrase:

LAN Bridge: integrate client on Meteobridge's LAN adapter into WLAN

IP Addresses

Receive automatically (DHCP)

Set manually

IP:

Netmask:

Gateway:

DNS:

Advanced Settings

Use Proxy

Server: http://

Port:

Figure 9

11 Select Station

11.1 Weather Station Type

Reference Figure 10. From the Menu tab, choose **Select Station**.
 Select **MeteoStick: WS1000** and then **Save**.

11.2 Frequency

Enter your weather station frequency (US or European).

11.3 RF Sensitivity

The RF sensitivity setting provides a tradeoff between wireless sensitivity and noise rejection. The default setting is -100 db and should not be modified unless the reception is challenging. Consult technical support if you have a connection issue from the weather station to the AirBridge.

11.4 Local Settings

11.4.1 Station Altitude

Enter your station altitude in meters. The WeatherBridge will automatically calculate the sea-level corrected pressure (or relative pressure) from the measured pressure (or absolute pressure).

To convert feet to meters:

1 foot = 0.3048 meters

Example: I live at 1,000 feet. What is the altitude in meters?

Altitude (meters) = 1,000 feet x 0.3048 meters/foot = 304.8 meters.

Note: Your console relative pressure may be different than the WeatherBridge calculated pressure because of the difference in the methodology of calculating relative or sea-level corrected pressure.

11.4.2 Pressure Correction

It may be necessary to adjust the relative pressure (pressure relative to sea-level) after your station altitude is entered to compensate for any inaccuracies.

11.4.3 Temperature Offset

The temperature offset allows you to adjust the outdoor temperature based on a calibrated source.

11.4.4 Rain Multiplier

The rain gauge multiplier allows you to adjust the rain gauge based on a calibrated source.

11.4.5 Humidity Stretch

The humidity stretch allows you to adjust the outdoor humidity range based on a calibrated source. Over time, your humidity sensor will drift due to contamination and may need recalibration.

Setup Network
Select Station
Weather Network
Push Services
System
License
Live Data

Weather Station

- Davis: Vantage Pro2, Vue USB ▼ IP _____
- Oregon Scientific: WMR-100, WMR-88
- Oregon Scientific: WMR-200
- Oregon Scientific: WMRS-200
- Oregon Scientific: WMR-968, WMR-928
- Ambient Weather WS-1090/2080/2090
- Fine Offset WH-1080/2080/3080 UV ▼
- Meade TE923, TE827, TE821, DV928
aka Hideki, Mebus, IROX
- Peet Bros: Ultimeter 100/800/2100
- Rainwise: Mk III
- Acurite: 1025/1035/1525 (use "USB Mode 3")
- Acurite: Internet-Bridge unlink sensors
- La Crosse/ELV: WS-2300
- La Crosse/ELV: WS-300-PC
- La Crosse/ELV: WS-300-PC-2
- La Crosse/ELV: WS-300-PC-US
- La Crosse/ELV: WS-444
- La Crosse/ELV: WS-500
- La Crosse/ELV: WS-550-Technoline
- La Crosse/ELV: WS-550-US
- La Crosse/ELV: WS-550-2-US
- La Crosse/ELV: WS-777
- La Crosse/ELV: WS-888
- HomeMatic/ELV: WDC 7000
- ELV: WDE1
- Meteostick: WS1000 US 915MHz ▼ RF Sens. -100db ▼ unlink sensors
- Meteostick: Vantage US 915MHz ▼ ID 1 ▼ RF Sens. -90db ▼ Rain 0.2 mm ▼

more Davis Sensors ▼

Meteobridge Weather Cam

- none
- Ubiquiti Cam IP: _____
- Version 1.1 Password: _____
- External Picture URL: _____

Local Settings

Station Altitude: <input type="text" value="0"/> meters ▼	Pressure Correction: <input type="text" value="1.000"/> inHg ▼	
Tolerated age of data: <input type="text" value="10 minutes"/> ▼	Temperature Offset: <input type="text" value="0.0"/> °C ▼	
Save historical data: <input type="text" value="every 10 minutes"/> ▼	Rain Multiplier: <input type="text" value="1.0"/>	
Wind Direction Adder: <input type="text" value="0"/> °	Humidity Stretch: <input type="text" value="0.0"/> →0% <input type="text" value="100.0"/> →100%	

Save



Figure 10

12 Live Data

To view the live data from your weather station, select the Live Data tab. To refresh the data, select the refresh button from your web browser. Reference Figure 11 for the typical live data presentation.

If you are experiencing wireless reception issues, refer to the guide below, and the Troubleshooting Guide in Section 18.

12.1 Best Practices for Wireless Communication

Wireless communication is susceptible to interference, distance, walls and metal barriers. We recommend the following best practices for trouble free wireless communication.

1. **Electro-Magnetic Interference (EMI).** Keep the AirBridge several feet away from computer monitors and TVs.
2. **Radio Frequency Interference (RFI).** If you have other 915 MHz devices and communication is intermittent, try turning off these other devices for troubleshooting purposes. You may need to relocate the transmitters or receivers to avoid intermittent communication.
3. **Line of Sight Rating.** This device is rated at 300 feet line of sight (no interference, barriers or walls) but typically you will get 100 feet maximum under most real-world installations, which include passing through barriers or walls.
4. **Metal Barriers.** Radio frequency will not pass through metal barriers such as aluminum siding. If you have metal siding, align the remote and console through a window to get a clear line of sight.

The following is a table of reception loss vs. the transmission medium. Each “wall” or obstruction decreases the transmission range by the factor shown below.

Medium	RF Signal Strength Reduction
Glass (untreated)	5-15%
Plastics	10-15%
Wood	10-40%
Brick	10-40%
Concrete	40-80%
Metal	90-100%

Weather Network Status

- ✔ Meteoplug Cloud: 2014-11-06 13:03:40 Success!
- ✔ Meteoplug Cloud (Live): 2014-11-06 13:04:45 Success!
- ✔ Weather Underground: 2014-11-06 13:04:38 Success!

Live Data

Sensor	Signal	Metric Data	Imperial Data
Indoor	7s 0.4%	25.3°C 30% 1010.0hPa (1010.0hPa)	77.5°F 30% 29.82inHg (29.82inHg)
Outdoor	11s -100db	28.6°C 12% (dew -3.6°C, heat 28.6°C)	83.5°F 12% (dew 25.5°F, heat 83.5°F)
Wind	11s -100db	4.5m/s (avg 3.5m/s) 69° ENE	10.1mph (avg 7.8mph) 69° ENE
Rain	11s -100db	rate 0.0mm/h	rate 0.00in/h
Solar	11s -100db	548W/qm	548W/qm
UV	11s -100db	3.0uvindex	3.0uvindex

Historical Data

Sensor	Now	Today		Yesterday		Month		Year	Erase
	13:04	Thu 06		Wed 05		Nov		2014	
		min	max	min	max	min	max	min	max
Indoor temp	25.3°C 77.5°F	24.1°C 75.4°F	26.1°C 79.0°F	24.1°C 75.4°F	27.2°C 81.0°F	19.8°C 67.6°F	28.8°C 83.8°F	19.8°C 67.6°F	28.8°C 83.8°F
Indoor hum	30%	30%	30%	30%	30%	30%	30%	30%	30%
Indoor dew	6.5°C 43.7°F	5.4°C 41.7°F	7.2°C 45.0°F	5.4°C 41.7°F	8.1°C 46.6°F	1.7°C 35.1°F	9.5°C 49.1°F	1.7°C 35.1°F	9.5°C 49.1°F
Indoor press	1010.0mb 29.82inHg	1008.7mb 29.79inHg	1012.6mb 29.90inHg	1004.5mb 29.66inHg	1008.7mb 29.79inHg	997.2mb 29.45inHg	1012.6mb 29.90inHg	995.9mb 29.41inHg	1012.6mb 29.90inHg
Indoor seapress	1010.0mb 29.82inHg	1008.7mb 29.79inHg	1012.6mb 29.90inHg	1004.5mb 29.66inHg	1008.7mb 29.79inHg	997.2mb 29.45inHg	1012.6mb 29.90inHg	995.9mb 29.41inHg	1012.6mb 29.90inHg
Outdoor temp	28.6°C 83.5°F	15.1°C 59.2°F	28.6°C 83.5°F	15.9°C 60.6°F	30.6°C 87.1°F	8.1°C 46.6°F	30.6°C 87.1°F	8.1°C 46.6°F	37.4°C 99.3°F
Outdoor hum	12%	11%	39%	10%	46%	10%	87%	10%	87%
Outdoor dew	-3.6°C 25.5°F	-4.9°C 23.2°F	3.8°C 38.8°F	-7.7°C 18.1°F	5.1°C 41.2°F	-8.1°C 17.4°F	16.6°C 61.9°F	-8.1°C 17.4°F	16.6°C 61.9°F
Outdoor heatindex	28.6°C 83.5°F	15.1°C 59.2°F	28.6°C 83.5°F	15.9°C 60.6°F	30.6°C 87.1°F	8.1°C 46.6°F	30.6°C 87.1°F	8.1°C 46.6°F	37.4°C 99.3°F
Wind wind	4.5m/s 10.1mph	0.0m/s 0.0mph	6.7m/s 15.0mph	0.0m/s 0.0mph	10.1m/s 22.6mph	0.0m/s 0.0mph	10.1m/s 22.6mph	0.0m/s 0.0mph	10.1m/s 22.6mph
Wind avgwind	3.5m/s 7.8mph	0.0m/s 0.0mph	4.3m/s 9.6mph	0.0m/s 0.0mph	6.6m/s 14.8mph	0.0m/s 0.0mph	6.6m/s 14.8mph	0.0m/s 0.0mph	6.6m/s 14.8mph
Wind chill	28.6°C 83.5°F	15.1°C 59.2°F	28.6°C 83.5°F	15.9°C 60.6°F	30.6°C 87.1°F	6.8°C 44.2°F	30.6°C 87.1°F	6.8°C 44.2°F	37.3°C 99.1°F
Rain rate	0.0mm/h 0.00in/h	0.0mm/h 0.00in/h	21.6mm/h 0.85in/h	0.0mm/h 0.00in/h	0.0mm/h 0.00in/h	0.0mm/h 0.00in/h	21.6mm/h 0.85in/h	0.0mm/h 0.00in/h	1134.0mm/h 44.65in/h
Rain total			0.0mm 0.00in		0.0mm 0.00in		0.0mm 0.00in		0.0mm 0.00in
Solar rad	548.0 W/qm	0.0 W/qm	548.0 W/qm	0.0 W/qm	599.0 W/qm	0.0 W/qm	772.0 W/qm	0.0 W/qm	772.0 W/qm
UV index	3.0uvi	0.0uvi	4.0uvi	0.0uvi	4.0uvi	0.0uvi	5.0uvi	0.0uvi	7.3uvi

Figure 11
Live Data

13 Weather Network

To upload the live data from your weather station, select the Weather Network tab.

13.1 Wunderground.com (Weather Underground)

To upload data to Wunderground.com, you must first register on the Wunderground.com website. Registration is free.

1. Visit <http://www.wunderground.com/> and select **Join** if you do not have an account.
2. Once registered with Wunderground.com you will need to sign up your station. To get started visit: <http://www.wunderground.com/weatherstation/setup.asp>
3. Once registered, enter your Station ID, Password and Upload Interval in the WeatherBridge fields.
4. Click on the wunderground.com logo to view your current data.



The screenshot shows a web interface with a navigation bar at the top containing tabs: Setup Network, Select Station, Weather Network (selected), Push Services, System, License, and Live Data. Below the navigation bar, there are two main configuration sections:



- Weather Underground:**
 - Upload Interval: every 5 seconds (dropdown), retry forever (dropdown)
 - ID: (with a green checkmark)
 - Password: (with a green checkmark)
 - Logo: WEATHER UNDERGROUND
- Meteo Plug Cloud Graphing:**
 - Upload Interval: every 10 minutes (dropdown)
 - Live Interval: every 10 seconds (dropdown), with icons for PC, mobile, and QR
 - Station Name:
 - Display Mode: Imperial
 - Logo: Meteo Plug




At the bottom of the configuration area, there is a dropdown menu labeled "Add more Weather Networks" and a "Save" button.

Figure 12

13.2 Other Web Hosting Services

To add more Weather Networks, select the pull down menu bar to select from the list.

Logo	Description	Website	Location
	Meteo Plug	www.meteoplug.com	Germany
	AWEKAS Weather Map Reporting System	www.awekas.at	Austria

Logo	Description	Website	Location
	WeatherBug Backyard	www.weatherbug.com	USA
	WeatherForYou	www.pwsweather.com	USA
	UK Met Office	www.metoffice.gov.uk	UK
	Windfinder	www.windfinder.com	USA
	Citizen Weather Observation Program	www.wxqa.com	USA
	Open Weather Map	www.openweathermap.org	USA

14 Push Services (Email, Twitter, http, ftp and mysql)

To upload the live data via email, twitter, http, ftp and mysql, select the Push Services tab.

WeatherBridge provides some additional "push services", which can send weather information via email, twitter, HTTP requests, FTP uploads, mysql queries or by implementing a user defined script.

All of these services can be triggered by certain alarm conditions, at a certain time of the day or in periodic intervals ranging from a few seconds to minutes or hours.

Configuring push services is done in two steps.

When you want to use a email, twitter, mysql or FTP you have to configure the basic authentication for these services fist.

Having configured the service, you can then define a specific event that uses of one of the services.

For additional information on Push Services, please visit:

http://meteobridge.com/wiki/index.php/Push_Services

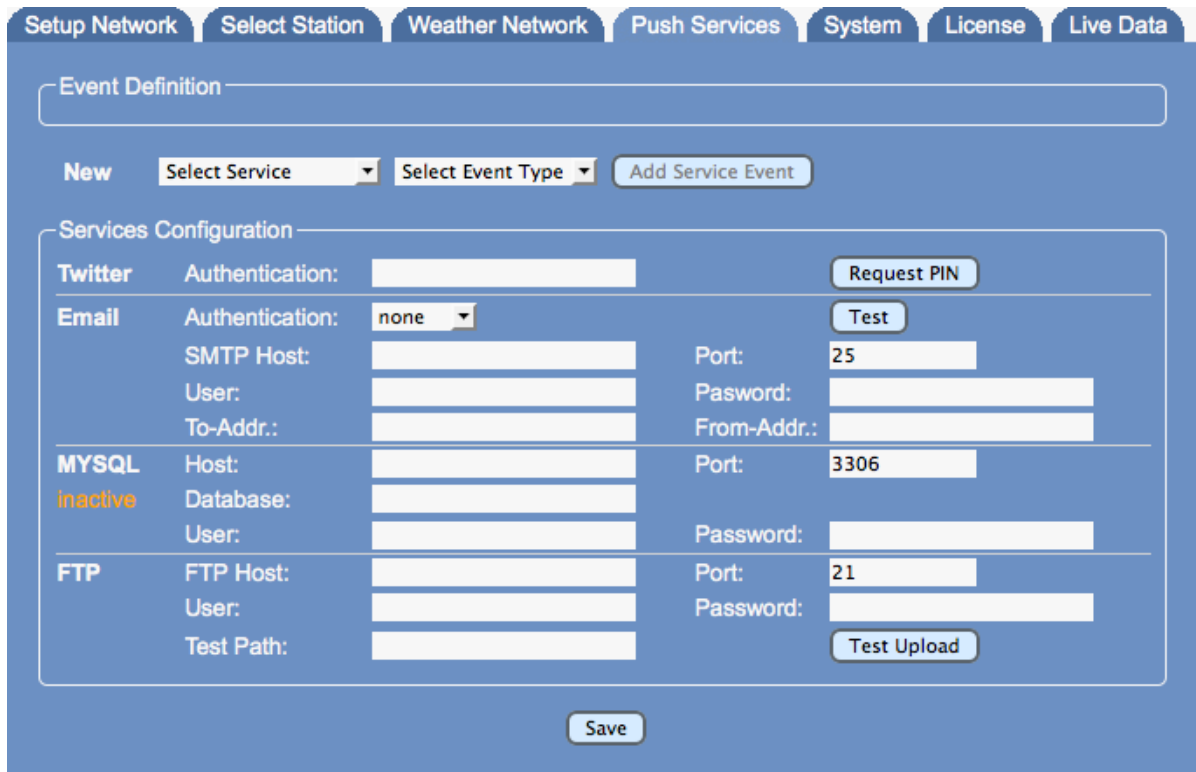


Figure 13

15 AirCam Weather Camera (optional)

The WeatherBridge supports the AirCam and uploads the images directly to Wunderground.com.

The AirCam is available at AmbientWeather.com:

<http://www.ambientweather.com/amaircam.html>

The AirCam connects directly to your network (router or switch) and the WeatherBridge automatically sends the image to Wunderground.com on a schedule.

15.1 Registering your AirCam on Wunderground.com

1. Visit <http://www.wunderground.com/> and select **Join** if you do not have an account.
2. Once registered with Wunderground.com you will need to sign up your AirCam. To get started visit:
<http://www.wunderground.com/webcams/signup.html>
3. Once registered, you will receive a Camera ID.
4. From the WeatherBridge toolbar, select the **Select Station** tab (Figure 14).
5. Enter the IP address and password defined in the AirCam user manual, and select **Initialize Cam** and **Save**.

6. From the WeatherBridge toolbar, select the **Weather Network** tab (Figure 15).
7. Enter the Camera ID and password from your Wunderground.com account.

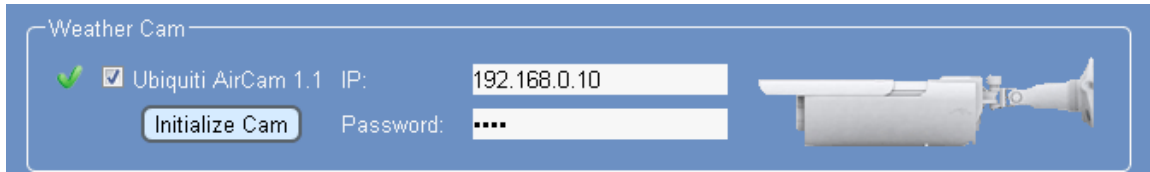


Figure 14



Figure 15

16 More Information

MeteoBridge is a Copyright of smartbedded UG (haftungsbeschränkt), all rights reserved. Please visit www.MeteoBridge.com for online documentation which will give more detail on features and lately added functions.

Note: WeatherBridge can only handle one weather station at a time. Parallel use of multiple weather stations is not supported.

Questions or comments about this manual? We are always striving to improve our documentation. Please send your comments to support@ambientweather.com.

16.1 Copyright

Meteostick (hardware and firmware) is copyright of smartbedded UG (a limited liability company in Germany). You are not allowed to make copies of the embedded Meteostick firmware or the hardware unless otherwise agreed to in writing.

16.2 Open Source Obligations

While being closed source, Meteostick is related to other Open Source publications:

1. Meteostick hardware is derived from a concept that Jean Claude Wippler (2012) has created as „JeeLink“ and published under Creative Commons license type „cc-by“ (<https://creativecommons.org/licenses/by/3.0/>). You can find more details about „JeeLink“ here: <http://jeelabs.net/projects/hardware/wiki/JeeLink>
2. Meteostick firmware makes use of BPM085 Arduino library from Jean Claude Wippler (2009) published under MIT license (<http://opensource.org/licenses/mit-license.php>). Link to code: <https://github.com/jcw/jeelib/blob/master/examples/Ports/bmp085demo/bmp085demo.ino>
3. Meteostick uses parts of the ATSHA204 library provided by Alessandro Chedini (2013)

published under MIT license (<http://opensource.org/licenses/mit-license.php>).
 Link to code: <https://gist.github.com/ghedo/6751045>

- Meteostick firmware uses the standard Arduino libraries provided under LGPL (<http://www.gnu.org/copyleft/lesser.html>), linked only, without modification.

17 AirBridge Specifications

Storage temperature:	-20° to 50° Celsius
Operating temperature:	0° to 50° Celsius (non condensing)
Receiver size:	75mm x 24mm x 10mm (without antenna)
Weight:	20g (without packaging)
Connector:	USB-A, 2.0, 1.x
Antenna:	flexible wire antenna about 90 mm long
Operating frequencies:	868 MHz in Europe, 915 MHz in USA, receiver only

18 Troubleshooting Guide

Problem	Solution
Outdoor sensor array does not communicate to the AirBridge.	<ul style="list-style-type: none"> Reference the Observer weather station manual for loss of communication instructions in the Troubleshooting guide. Move the AirBridge as close as possible to the weather station and reset the AirBridge by powering down and up the WeatherBridge.
Switched to WiFi and can no longer access the device.	<ul style="list-style-type: none"> The IP address may change. Refer to Section 6 to find the new IP address (if required).
Cannot communicate to the WeatherBridge, both LAN (cabled) and WLAN (wireless).	<ul style="list-style-type: none"> Plug the WeatherBridge into your router and perform a factory default (Section 10.4).

19 Certifications

smartbedded UG (limited liability) declares compliance of Meteostick in regard to RoHS. All parts used are RoHS compliant.

Declaration of Conformity



We, smartbedded UG (haftungsbeschränkt)
 Querweg 35, 24632 Lentförden, Germany

Declare under our sole responsibility that the product:

Product name:	Meteostick
---------------	------------

Trade name:	Meteostick
Type of model:	1.0

To which this declaration relates is in conformity with the requirements of the following specifications:

- ANSI C63.4
- FCC 47 CFR Part 15, Subpart B, Class B Digital Device.

Supplementary information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

Signed by or for the manufacturer :



Name (in writing): Anke Pasternak
Title: CEO
Place and date of issue: Lentförden, April 7,
2014



We, smartbedded UG (haftungsbeschränkt)
Querweg 35, 24632 Lentförden, Germany

Declare under our sole responsibility that the
product:

Product name:	Meteostick
Trade name:	Meteostick
Type of model:	1.0

Is in conformity with the applicable requirements
of the following documents:

- DIRECTIVE 1999/5/EC on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity
- DIRECTIVE 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC
- DIRECTIVE 2009/125/EC on establishing a framework for the setting of ecodesign requirements for energy-related products
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment

I hereby declare that the equipment named above has been designed with the relevant sections of the above referenced specifications. The unit complies with all applicable essential requirements of the directives.



Signed by or for the manufacturer :
Name (in writing): Anke Pasternak
Title: CEO
Place and date of issue: Lentförden, April 7,
2014

20 Liability Disclaimer

The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.



Reading the “User manual” is highly recommended. The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.

This product is designed for personal use as indication of weather conditions. This product is not to be used for medical purposes or for public information.

The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.

No part of this manual may be reproduced without written authorization of the manufacturer.

Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT.

21 Warranty Information

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner’s manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) units used for other than home use (5) applications and uses that this product was not intended.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.